

TSSG/APSD/ISAB-005/69  
8 August 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Visit to HPSC and ATR Contractor

A. High Precision Stereo Comparator (HPSC)

1. Four NPIC representatives visited [ ]  
[ ] on 7 - 9 July 1969 to discuss the computer  
programs and math models for the comparator. Participants in  
meetings were:



2. The first day consisted of answering questions [ ]  
raised concerning our strip and pan systems. He was concerned  
about the imaged direction of flight, time tracks, location of  
fiducials, translation factors, and the particular flight para-  
meters available. [ ] math models were written using the  
premise that a duplicate positive (DP) emulsion up will give a  
correct ground view. This is not the case with the [ ] system.  
It would seem that a change will have to be made either in the  
mensuration procedure or the math model. In addition, a decision  
must be made, presumably by PHD, as to which frame system will be  
programmed for the HPSC.

3. It appears that the final computer programs will be system  
dependant which will necessitate reprogramming for future system.

4. The comparator, as the schedule stands now, will be assembled  
at NPIC in mid 1970.

5. [ ] has no provision for a training program but said that  
NPIC representatives could visit [ ] during initial assembly and  
become familiar with the system by osmosis.

6. [ ], briefed us the last two  
days on the computer programs. [ ] has subcontracted all the

**SECRET**

Approved For Release 2003/12/04 : CIA-RDP78B05171A000100010129-6

TSSG/APSD/ISAB-005/69

SUBJECT: Visit to HPSC and ATR Contractor

programming to [ ] gave us a flow chart which shows which subroutines are in FORTRAN and which are in ADP (machine language), the size of each, and how close each is to completion. He also gave us a booklet which explains each subroutine.

25X1

7. The partial derivatives for the tracking and optical transformation matrices (PTOP and TMAT) are accomplished by the definition method which is a procedure we have used.

8. The image data that [ ] IEG/PHD, sent to [ ] has not yet been used.

25X1

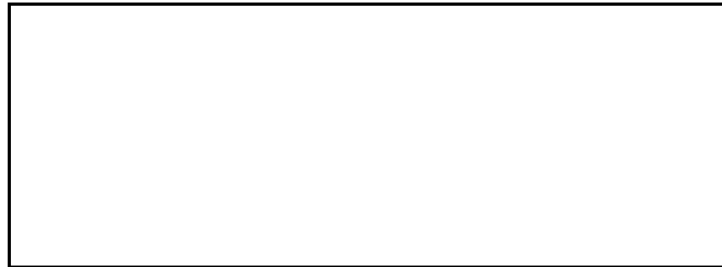
9. [ ] gave us a demonstration of the read input portion of the computer program.

10. The final computer programs and documentation will be completed in February 1970.

B. Automatic Target Readout (ATR)

1. Three NPIC representatives visited [ ] on 10 July to discuss the hardware, software, and the progress of each. Participants in meetings were:

25X1



25X1

2. The system is in the R & D stage and is designed for the [ ] but probably could be modified for other systems by changing the software. The system is capable of either scanning an entire frame for clouds (general) or just a portion of the frame (look thru). There is sufficient storage in the core memory to accommodate 2-bit decisions for a maximum of 3000 targets using the look thru method. There are 4 classes of decisions; clear, near clear, near cloud, and cloud.

25X1

Approved For Release 2003/12/04 : CIA-RDP78B05171A000100010129-6

**SECRET**

~~SECRET~~  
**SECRET**

Approved For Release 2003/12/04 : CIA-RDP78B05171A000100010129-6

TSSG/APSD/ISAB-005/69

SUBJECT: Visit to HPSC and ATR Contractor

25X1 3. [ ] is currently in Phase III which will determine whether to use an optical or an electronic scanner. The optical scanner was basically designed for the look thru method whereas the electronic scanner was primarily designed for the general scan method. The selected sensor will be capable of handling both methods.

4. NPIC will provide the necessary computer programs to predict the position of the targets on the frames.

25X1 5. [ ] said that the software design is to be completed in October 1969. Software compilation and hardware subsystems are to be completed in April 1970. Interfacing and unification of all software and hardware to begin in April 1970.

25X1 6. [ ] gave us a demonstration of the electronic sensor using [ ] photography.  
25X1

[ ]

NPIC/TSSG/APSD/ISAB/PAS

25X1

Distribution:

Original - NPIC/TSSG/APSD/ISAB  
1 - NPIC/TSSG/APSD  
1 - NPIC/TSSG/DED  
1 - NPIC/PSG/AID  
1 - NPIC/IEG/PHD

Approved For Release 2003/12/04 : ~~SECRET~~ CIA-RDP78B05171A000100010129-6

Approved For Release 2003/12/04 : CIA-RDP78B05171A000100010129-6

FROM		INITIALS		DATE	REMARKS
Applied Photo Science Division				11 August 1969	
DIRECTOR					
DEP/DIRECTOR					
EXEC/DIRECTOR					
SPECIAL ASST					
ASST TO DIR					
ASST TO DEP/DIR					
CH/PPBS					
DEP CH/PPBS					
EO/PPBS					
CH/IEG					
DEP CH/IEG					
EO/IEG					
CH/PSG					
DEP CH/PSG					
EO/PSG					
TSSG/DED					
CH/TSSG					
DEP CH/TSSG					
EO/TSSG					
CH/SSD/TSSG					
PERSONNEL					
LOGISTICS					
TRAINING					
RECORDS MGT					
SECURITY					
FINANCE					
DIR/IAS/DDI					
CH/DIAXX-4					
CH/DIAAP-9					
CH/SPAD					

Approved For Release 2003/12/04 : CIA-RDP78B05171A000100010129-6